

In the Claims:

Claims 1-45 are pending in the application.

Claims 21-25 and 27-29 stand allowed.

Claims 1, 4, 6-11, 13-20, 26, 30, 31, 35-37 and 42-45 stand rejected.

Claims 2, 3, 5, 12, 32-34 and 38-41 are objected to.

Explanation of Amendments in the Claims:

1.(currently amended) A climate control system for use in a greenhouse having an exterior wall structure which includes primarily transparent panels allowing entry to an interior of natural light, the system being arranged for conditioning the air within the interior and comprising:

a plurality of benches arranged to be located within the interior and provide support surfaces for supporting crop materials thereon for receiving the natural light and growing within the interior; and

an a plurality of air handling systems each associated with a respective one of the benches and each comprising:

an air intake plenum having at least one air intake,
a fan connected to the air intake plenum,
an outlet duct connected to the fan having an air outlet for expelling air from the outlet duct into the interior of the greenhouse,

and at least one air conditioning component for conditioning the air transported from the air intake plenum to the outlet duct by the fan;

the air intake plenum of each of the air handling systems including at least a part thereof mounted underneath the respective one of the benches and forming at least a part of a support for the respective one of the benches.

Cancel Claim 2.

3.(currently amended) The system according to Claim 21 wherein the part of the air intake plenum under the respective one of the benches defines a rectangular housing arranged for supporting a horizontal bench top.

4.(original) The system according to Claim 3 wherein the horizontal bench top is slidable side to side across the housing.

5.(original) The system according to Claim 3 wherein the horizontal bench top is tiltable about a horizontal axis longitudinally along the housing

6.(currently amended) The system according to Claim 1 wherein the outlet duct includes a vertical duct section at one end of the respective one of the benches.

7.(currently amended) The system according to Claim 6 wherein the outlet duct includes a horizontal discharge duct section connected to the vertical duct section and extending over the respective one of the benches for discharging the air therefrom downwardly onto the respective one of the benches.

8.(original) The system according to Claim 7 wherein the horizontal duct section comprises a flexible tube shaped to form an elliptical cross section which is wider than it is high.

9.(currently amended) The system according to Claim 1 wherein the air intake plenum underneath the respective one of the benches contains at least one heating coil for heating the air.

10.(currently amended) The system according to Claim 1 wherein the air intake plenum underneath the respective one of the benches contains at least one cooling coil for cooling the air.

11.(currently amended) The system according to Claim 10 wherein said at least one air intake of the air intake plenum underneath the respective one of the

benches includes at least two inlets a plurality of air intakes and wherein there is provided a respective one of a plurality of cooling coils at each of the inlets air intakes.

12.(currently amended) The system according to Claim 11 wherein supply of cooling fluid to each of the plurality of cooling coils is controlled by a cooling system which is arranged to effect sub-cooling at one of the plurality of cooling coils for de-humidifying the air.

13.(currently amended) The system according to Claim 1 wherein the fan is located in a fan housing at one end of the respective one of the benches.

14.(currently amended) The system according to Claim 1 wherein there is provided an air flow connection which is arranged to communicate with one sidewall of the exterior wall structure at one end of the respective one of the benches.

15.(currently amended) The system according to Claim 1 wherein said at least one air intake of the air intake plenum underneath the bench has two inlets includes one air intakes at each side and one air intake at an end.

16.(currently amended) The system according to Claim 1 wherein the air intake plenum underneath the respective one of the benches contains fogging nozzles for applying water droplets to the air.

17.(original) The system according to Claim 16 wherein the fogging nozzles are supplied with water under pressure from a fogging water supply system including a water pump operable to supply water under pressure to an accumulator tank having a gas membrane, the tank being arranged to supply the water under pressure to the nozzles and including a pressure control valve arranged to operate the pump to

maintain the pressure within the tank between upper and lower pressure limits so as operate the pump only when the lower pressure limit is reached.

Cancel Claim 18.

Cancel Claim 19.

20.(currently amended) A climate control system for use in a greenhouse having an exterior wall structure which includes primarily transparent panels allowing entry to an interior of natural light, the system being arranged for conditioning the air within the interior and comprising:

a plurality of benches each arranged to be located within the interior and provide support surfaces for supporting crop materials thereon for receiving the natural light and growing within the interior; and

a plurality of air handling systems each comprising:

an air intake plenum having at least one air intake,

a fan connected to the air intake plenum,

an outlet duct connected to the fan having an air outlet for expelling air from the outlet duct into the interior of the greenhouse,

and at least one air conditioning component for conditioning the air transported from the air intake plenum to the outlet duct by the fan;

the plurality of air handling systems being equal in number to the plurality of elongate benches such that each bench has associated therewith a respective one of the air handling systems.

21.(currently amended) The system according to Claim 20 wherein the outlet duct of each of the air handling systems includes a vertical duct section at one end of the respective bench.

22.(currently amended) The system according to Claim 21 wherein the outlet duct of each of the air handling systems includes a horizontal discharge duct section connected to the vertical duct section and extending over the respective bench for discharging air downwardly onto the respective bench.

23.(original) The system according to Claim 22 wherein the horizontal duct section comprises a flexible tube shaped to form an elliptical cross section which is wider than it is high.

24.(currently amended) The system according to Claim 20 wherein each air intake plenum contains at least one heating coil for heating the air.

25.(currently amended) The system according to Claim 20 wherein each air intake plenum contains at least one cooling coil for cooling the air.

26.(currently amended) The system according to Claim 20 wherein said at least one air intake of each air intake plenum includes at least two inlets air intakes and wherein there is provided a cooling coil at each of the inlets air intakes.

27.(currently amended) The system according to Claim 26 wherein supply of cooling fluid to each of the cooling coils is controlled by a cooling system which is arranged to effect sub-cooling at one of the cooling coils for de-humidifying the air.

28.(currently amended) The system according to Claim 20 wherein the fan of each air handling system is located in a housing at one end of the respective bench.

30 29.(currently amended) The system according to Claim 20 wherein the outlet duct of each air handling system is arranged to communicate with exterior air at one sidewall of the exterior wall structure at one end of the respective bench.

34 30.(currently amended) The system according to Claim 38 37 wherein the fan is mounted in a fan housing with the fan housing at one end of the bench arranged to be located at one exterior wall of the greenhouse and wherein the fan housing has a connection for exterior air arranged to extend through said one exterior wall.

32 31.(currently amended) The system according to Claim 34 20 wherein the bench has at least a part of the air intake plenum mounted underneath the bench as at least a part of the support therefor.

33 32.(currently amended) The system according to Claim 32 31 wherein the air intake plenum under the bench defines a rectangular housing arranged for supporting a horizontal bench top.

34 33.(currently amended) The system according to Claim 32 31 wherein the horizontal bench top is slidable side to side across the housing.

35 34.(currently amended) The system according to Claim 33 32 wherein the horizontal bench top is tiltable about a horizontal axis longitudinally along the housing

36 35.(currently amended) The system according to Claim 34 20 wherein the outlet duct includes a vertical duct section at one end of the respective bench.

37 36.(currently amended) The system according to Claim 36 35 wherein the outlet duct includes a horizontal discharge duct section connected to the vertical duct section and extending over the bench for discharging air downwardly onto the bench.

38 37.(currently amended) A climate control system for use in a greenhouse having an exterior wall structure which includes primarily transparent panels allowing entry to an interior of natural light, the system being arranged for conditioning the air within the interior and comprising:

 a bench arranged to be located within the interior and provide support surfaces for supporting crop materials thereon for receiving the natural light and growing within the interior;

 an air handling system comprising:

 an air intake plenum having at least one air intake,

 a fan connected to the plenum,

 an outlet duct connected to the fan having an at least one air outlet for expelling air from the outlet duct into the interior of the greenhouse,

a fan connected to the plenum and the outlet duct and arranged to transfer air from the plenum to the outlet duct;

 and at least one air conditioning component for conditioning the air transported from the air intake plenum to the outlet duct by the fan;.

the air intake plenum including at least a part thereof mounted underneath the bench with the at least one air intake thereof located so as to draw air into the plenum from underneath the bench;

and the outlet duct including at least a part thereof above the bench with the at least one air outlet thereof arranged for discharge of the conditioned air at a position above the bench to as to travel downwardly onto the bench.

39 38.(currently amended) The system according to Claim 38 37 including a plurality of benches wherein each bench has associated therewith a respective air intake plenum and a respective fan and wherein at least a part of the plenum associated therewith is mounted underneath the respective bench and forming at least a part of a support for the respective bench.

40 39.(currently amended) The system according to Claim 39 37 wherein the part of the air intake plenum under the bench defines a rectangular housing arranged for supporting a horizontal bench top.

44 40.(currently amended) The system according to Claim 40 39 wherein the horizontal bench top is slidable side to side across the housing.

42 41.(currently amended) The system according to Claim 40 39 wherein the horizontal bench top is tiltable about a horizontal axis longitudinally along the housing.

43 42.(currently amended) The system according to Claim 38 37 wherein the outlet duct includes a vertical duct section at one end of the bench.

44 43.(currently amended) The system according to Claim 43 42 wherein the outlet duct includes a horizontal discharge duct section connected to the vertical

duct section and extending over the bench with the at least one air outlet thereof arranged on an underside thereof for discharging the air therefrom downwardly onto the bench.

45 44.(currently amended) The system according to Claim 44 43 wherein the horizontal duct section comprises a flexible tube shaped to form an elliptical cross section which is wider than it is high.

46 45.(currently amended) The system according to Claim 38 37 wherein there is provided an air flow connection which is arranged to communicate with one sidewall of the exterior wall structure at one end of the bench.

Add new claim:

46.(new) The system according to Claim 43 wherein the at least one air outlet comprises a plurality of perforations in the underside of the horizontal duct section.